SUPPORT FOR THE AMENDMENTS

Support for the amendment of Claim 1 is found on page 5, line 27, in the specification.

No new matter is believed added to this application by entry of this amendment.

Upon entry of this amendment, Claims 1-23 are active.

REMARKS/ARGUMENTS

The claimed invention provides a formulation comprising:

(i) at least one organoalkoxysilane and/or at least one organoalkoxysiloxane;

(ii) at least one inorganic oxidic powder;

from **0.001 to < 0.8 mole of water per mole of Si** in (i) and

(iii), optionally, an organic or inorganic acid;

wherein

the formulation is a liquid dispersion having a viscosity of less than 1500 mPa·s,

a content of the at least one inorganic oxidic powder (ii) is from 5 to 50% by weight of the liquid formulation, and a weight ratio of the at least one organoalkoxysilane and/or at least one organoalkoxysiloxane to the at least one inorganic oxidic powder is from 19:1 to 1:1.

Applicants have described that the systems according to the invention are "generally clear, transparent to opalescent, readily pourable liquids having a comparatively low viscosity and a hitherto unknown extremely high solids content." (page 2, lines9-11). Surprisingly, Applicants have discovered that the claimed formulation is obtained by an intensive dispersing operation with the addition of less than 0.8 mole of water per mole of silicon in the

at least one organoalkoxysilane and/or at least one organoalkoxysiloxane (page 1, line 26 bridging to page 2). No such formulation is disclosed or suggested in the cited refereneces.

Applicants wish to thank Examiner Toscano for the useful and courteous discussion of the above-identified application with Applicants' U.S. representative on July 26, 2010. During that discussion, Applicants U.S. representative discussed amendment of Claim 1 to include description of a water content from 0.001 to < 0.8 mole of water per mole of Si, and reviewed each cited reference in view of the water content associated with preparation of the described composition. Applicants' U.S. representative showed that none of the cited references disclosed or suggested the formulation as claimed herein. The following reiterates and expands upon that discussion.

Applicants respectfully note that Claim 1 is herein amended to include the description that the formulation contains from 0.001 to < 0.8 mole of water per mole of Si in component i).

The rejection of Claims 1-14 and 16-23 under 35 U.S.C. 102(b) over Mehnert et al. (U.S. 6,830,816) is respectfully traversed.

Mehnert describes a composition containing a silico-organic nanohybrid and/or microhybrid capsules obtained by in-situ reaction in a synthetic resin between metal oxide particles and an organofunctional silicon compound having at least one hydrolysable group(Abstract). Mehnert describes the composition as a paste (see for example, Col 5, lines 42 and 59) and describes that the content of water used is a well defined quantity being from 1 to 6 moles of water per mole if silicon in the silico-organic component (Col. 13, lines 55-58). Nowhere does this describe a composition being a liquid dispersion having a viscosity of less than 1500 mPa·s, or comprising from 0.001 to < 0.8 mole of water per mole of Si.

Applicants respectfully submit that a proper finding of anticipation requires that "[e]very element of the claimed invention ... be literally present, arranged as in the claim. *Perkin-Elmer Corp.*, 732 F.2d at 894, 221 USPQ at 673; *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 771-72, 218 USPQ 781, 789 (Fed. Cir. 1983), *cert. denied*, 465 U.S. 1026 [224 USPQ 520] (1984). The identical invention must be described in as complete detail in the reference as is described in the claimed invention. Accordingly, in view of the above showing that the reference does not disclose or suggest all the claimed elements, Applicants respectfully request that the rejection of Claims 1-14 and 16-23 under 35 U.S.C. 102(b) over Mehnert be withdrawn.

The rejection of Claims 1-23 under 35 U.S.C. 102(b) over Burger et al. (U.S. 6,696,904) is respectfully traversed.

Burger describes a composition containing an alkyltrioalkoxysilane, an alkoxysiloxane or tetraalkoxysilane, an aqueous silica sol, an acid and an alcohol or glycol (Abstract). The aqueous silica sol constitutes from 15-25 % by weight of the composition (Col. 4, lines 34-35) and the sol contains from 80 to 50 % by weight water. Burger is silent regarding a content of water. However, in each of Examples 1-4 a composition containing 3.48 moles methyltriethoxysilane [620/178], 0.87 mole tetraethoxysilane [181/208] and 5.1 mole water, i.e., 5.1/4.35 (H_2O/Si) = 1.17, is described. Accordingly, Applicants submit that the cited reference does not disclose all the claimed elements, nor are all the claimed elements suggested. Therefore, the reference can neither anticipate nor render the present invention obvious and Applicants respectfully request that the rejection of Claims 1-23 under 35 U.S.C. 102(b) over Burger be withdrawn.

The rejection of Claims 1-23 under 35 U.S.C. 102(b) over Edelmann et al. (U.S. 6,699,586) is respectfully traversed.

Edelmann describes an organosilicon system containing nanoscale and/or microscale oxidic particles having an organosilicon shell (Abstract). The system is prepared using from 1 to 6 moles of water per mole of silicon (Col. 9, lines 19-22). Nowhere does this reference disclose, suggest or provide motivation which would have led one of ordinary skill in the art to a composition based on from 0.001 to < 0.8 mole of water per mole of Si. Accordingly, this reference can neither anticipate nor render the present invention obvious and Applicants respectfully request that the rejection of Claims 1-23 under 35 U.S.C. 102(b) over Edelmann be withdrawn.

The rejection of Claims 1-9 under 35 U.S.C. 102(b) or in the alternative, under 35 U.S.C. 103(a) over Takarada et al. (U.S. 6,830,816) is respectfully traversed.

Takarada describes a coating composition containing an organic silicon compound and inorganic submicron particles stabilized with aluminum perchlorate (Abstract). When the organo silicon compound is a partial hydrolysate, water is added to the system (Col. 5, lines 27-32). Although no specific guidance is provided relative to an amount of water, examples 1-3 describe a mole ratio of water to Si of 2.1/ 1.11 (0.6 mole of 3-glycidoxypropylmethyldiethoxysilane [125/206] and 0.51 mole 3-glycidoxypropyl-trimethoxysilane [100/194])(Col. 6, lines 17-26). Therefore, Applicants submit that Takarada cannot anticipate or render the present invention obvious and respectfully request that the rejection of Claims 1-9 under 35 U.S.C. 102(b) or in the alternative, under 35 U.S.C. 103(a) over Takarada be withdrawn.

The rejection of Claims 10-23 under 35 U.S.C. 103(b) over Takarada in view of Hardman et al. (U.S.4,329,273) is respectfully traversed.

Applicants have described a deficiency of the primary reference in the above paragraph. The Office has acknowledged that Takarada does not disclose how much water to

be added per mole of silicon (Official Action dated March 2, 2010, page 7, last line) and alleges that one of ordinary skill would learn the deficient ratio from Hardman.

However, as described above, Takarada does provide examples wherein a ratio of water to silicon is greater than 1.0 and would therefore teach away from the ratio of less than 0.8 as according to the present invention.

Hardman describes an elastomeric silicone rubber composition containing a vinyl-terminated polysiloxane polymer, a hydride siloxane cross-linking agent, a platinum catalyst and a partial hydrolysis product of an aliphatically unsaturated hydrolysable alkoxy silane (Abstract). The partially hydrolysed aliphatically unsaturated alkoxy silane serves as a self bonding additive which when added to the composition can be cured at elevated temperature. Hardman describes hydrolysis **only of a curing component** of the system while the polymer component is already formed and any direction provided is to assure the self-bonding additive is active and compatible with the SiH olefin platinum catalyzed elastomer system (Col. 4, lines 32-48). The relationship of water added is only directed to the content of the aliphatically unsaturated alkoxy silane and is not directed to the entire Si content of the composition.

Moreover Hardman is directed to an elastomeric silicone rubber composition, while Takarada is directed to a hard coating composition. Applicants submit that the two compositions are for different intended uses, containing different types of components, i.e., Hardman contains a vinyl-terminated polysiloxane polymer whiles Takarada contains silane monomer compounds. Hardman employs water to partially hydrolyze the aliphatically unsaturated alkoxy silane self bonding agent only, while Takarada describes hydrolysis of the main component silicon compound.

Moreover, in a Precedential Opinion rendered by the Board of Patent Appeals and Interferences in *Ex parte* Whalen II (Appeal 2007-4423, Application 10/281,142) on July 23, 2008, the Board stated:

> The KSR Court noted that obviousness cannot be proven merely by showing that the elements of a claimed device were known in the prior art; it must be shown that those of ordinary skill in the art would have had some "apparent reason to combine the known elements in the fashion claimed."
>
> The Examiner has not persuasively explained why a person of ordinary skill in the art would have had a reason to modify the compositions taught by Evans, Greff'767, or Taki in a way that would result in the compositions defined by the claims on appeal. Therefore, The Examiner has not made out a prima facie case of obviousness under 35 U.S.C. § 103.

Applicants submit that as described above, Hardman and Takarada are directed to different technologies and one of ordinary skill would not look to the description of Hardman related to hydrolysis of a self-bonding additive to determine a water content of an organic silicon monomer composition as described by Takarada. Moreover, the Office has not addressed this difference and simply states a conclusion without an explanation of how or why one would make such a modification.

In view of all the above, Applicants submit that the cited combination of references cannot render the present invention obvious and respectfully request that the rejection of Claims 10-23 under 35 U.S.C. 103(b) over Takarada in view of Hardman be withdrawn.

The rejection of Claims 1-23 on the ground of non-statutory obviousness-type double patenting over Mehnert in view of Hardman is respectfully traversed.

Mehnert describes a composition containing a silico-organic nanohybrid and/or microhybrid capsules obtained by in-situ reaction in a synthetic resin between metal oxide particles and an organofunctional silicon compound having at least one hydrolysable group(Abstract). Mehnert describes the composition as a **paste** (see for example, Col 5, lines

42 and 59) and describes that **the content of water used is a well defined quantity being from 1 to 6 moles of water per mole if silicon** in the silico-organic component (Col. 13, lines 55-58).

Hardman describes an **elastomeric silicone rubber composition** containing a vinyl-terminated polysiloxane polymer, a hydride siloxane cross-linking agent, a platinum catalyst and a partial hydrolysis product of an aliphatically unsaturated hydrolysable alkoxy silane (Abstract). The partially hydrolysed aliphatically unsaturated alkoxy silane serves as a self bonding additive which when added to the composition can be cured at elevated temperature. Hardman describes **hydrolysis only of a curing component** of the system while the polymer component is already formed and any direction provided is to assure the self-bonding additive is active and compatible with the SiH olefin platinum catalyzed elastomer system (Col. 4, lines 32-48). The relationship of water added is only directed to the content of the aliphatically unsaturated alkoxy silane and is not directed to the entire Si content of the composition.

Therefore, neither reference describes from 0.001 to < 0.8 mole of water per mole of Si in the composition. Accordingly, the cited combination cannot disclose or suggest all the claimed elements and cannot render the present invention obvious. Applicants respectfully request that the rejection of Claims 1-23 on the ground of non-statutory obviousness-type double patenting over Mehnert in view of Hardman be withdrawn.

The rejections of Claims 1-23 on the ground of non-statutory obviousness-type double patenting over Burger and over Edelmann are traversed on the basis of the above arguments and remarks.

As shown above, Burger is silent regarding a content of water. However, in each of Examples 1-4 a composition containing 3.48 moles methoxytriethoxysilane, 0.95 mole tetraethoxysilane and 5.1 mole water, i.e., 5.1/4.44 (H_2O/Si) = 1.15, is described.

Accordingly, Applicants submit that the cited reference does not disclose all the claimed elements, nor are all the claimed elements suggested.

Likewise, Edelmann describes an organosilicon system containing nanoscale and/or microscale oxidic particles having an organosilicon shell prepared using from 1 to 6 moles of water per mole of silicon (Col. 9, lines 19-22). Nowhere does this reference disclose, suggest or provide motivation which would have led one of ordinary skill in the art to a composition based on from 0.001 to < 0.8 mole of water per mole of Si.

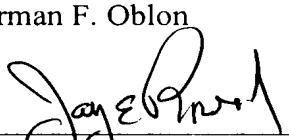
In view of all the above, Applicants submit that neither Burger or Edelman can render the present invention obvious and respectfully request that the rejections of Claims 1-23 on the ground of non-statutory obviousness-type double patenting over Burger and over Edelmann be withdrawn.

The provisional rejection of Claims 1-23 on the ground of nonstatutory obviousness-type double patenting over Claims 26, 33, 27, 53, and 34 of copending Application No. 11/258,025 is respectfully traversed. The copending application does not disclose or suggest the formulation is a liquid dispersion having a viscosity of less than 1500 mPa·s and does not recognize a water to Si mole ratio of less than 0.8 as an element of the invention. A preferred amount of water is from 1 to 6 moles per mole of Si [0111]. Accordingly, Applicants submit that the copending application cannot render the present invention obvious and respectfully request that the provisional rejection of Claims 1-23 on the ground of nonstatutory obviousness-type double patenting over Claims 26, 33, 27, 53, and 34 of copending Application No. 11/258,025 be withdrawn.

Applicants respectfully submit that the above-identified application is now in condition for allowance and early notice of such action is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, L.L.P.
Norman F. Oblon



Jay E. Rowe, Jr., Ph.D.
Registration No. 58,948

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 07/09)